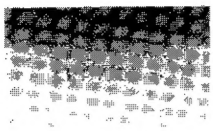
Rhapsody Developer Release 2

Installation manual for Yellow Box for Windows NT/95



Welcome to Yellow Box for Windows

"Yellow Box for Windows" is a code name for a new set of object-oriented frameworks that can be accessed through a consistent and well-designed set of APIs based on the integration of Apple technologies and the Java™ programming language. By writing code for Yellow Box, developers will be able to create robust applications for the Rhapsody operating system and other computer platforms such as Microsoft Windows 95 and Windows NT.

Yellow Box for Windows also provides development tools for use with Microsoft C++, and a runtime environment for deploying programs on the Windows platform.

System requirements

To use Yellow Box for Windows, your computer must have the following:

- 100% Pentium-compatible microprocessor
- Windows 95 or Windows NT 4.0
- Windows-compatible CD-ROM drive
- at least 32 MB of available RAM (48 MB for development)
- at least 200 MB of available hard disk space

The Virtual Memory paging file sizes should be set to 64 MB initial and 129 MB maximum. The TCP/IP networking protocol should be configured and enabled.

Before you install

Before you install Yellow Box for Windows, you may need to update your computer's Winsock libraries and remove any previous versions of Yellow Box, OpenStep, or D'OLE from your computer.

Updating Windows 95 Winsock libraries

If your Windows 95 computer is only occassionally connected to a network, make sure your computer has Microsoft Winsock 2.0. After installing Winsock 2.0, restart your computer.

Note: The Winsock 2.0 installer, WS2SETUP.EXE, is provided on the Yellow Box for Windows CD. You cannot redistribute this file. For the complete Winsock 2.0 SDK see:
ftp://ftp.microsoft.com/bussys/winsock2/ws295sdk.exe

If your Windows 95 computer is always connected to a network, or is never networked, you do not need to install Microsoft Winsock 2.0.

Removing Yellow Box for Windows

To remove the Yellow Box software, follow these steps:

1 **Click the Start button, then select the Programs menu, then select the bottom (common) Startup menu.**

Select the items below, in the order shown. For each, click Yes when asked if you want to quit the processes.

- Pasteboard Server (pbs.exe)
- Window Server (windowserver.exe)

2 **Click the Start button, then select Programs. Choose Bourne Shell from the Yellow Box menu.**

Enter the following commands in the Bourne Shell window:

```
cd $NEXT_ROOT/Library/System
./machd -remove
./nmserver -remove
```

Click Yes when asked if you want to terminate the processes.

3 **Click the Start button, then select Programs. Choose Uninstall Yellow Box from the Yellow Box menu.**

The Uninstall program removes the Yellow Box software from your computer. This process takes a few minutes to complete.

4 **Restart your computer.**

Removing OpenStep or D'OLE

If any version of OpenStep (User or Developer Editions) or D'OLE is currently installed, remove it by following these steps:

1 **Quit all OpenStep and D'OLE programs.**

To do this, quit any OpenStep applications that are currently open. Then, make sure none of the items in the NeXT Software program group are running.

2 **Delete the OpenStep or D'OLE directory.**

Delete the directory and all of its contents. The directory path is specified by the NEXT_ROOT environment variable.

3 **Delete program groups.**

Delete the NeXT Software program group, and remove the MachD, Mach nmserver, Window Server, and Pasteboard Server icons from the Startup group.

4 **Clean up the environment variables.**

- Remove NEXT_ROOT from the system environment variables list.
- If the OpenStep development software is installed, edit the Lib system environment variable to delete the entries for directories you deleted in step 2, above.
- Edit the Path system environment variable to delete the entries for the directories you deleted in step 2, above.

5 **Clean up the Windows Registry.**

IMPORTANT Incorrectly editing the Registry may prevent your computer from starting up. If you're not familiar with editing the Registry, skip this step.

If you want to edit the Registry, examine the "NeXT" keys and remove those that appear to be have been created for the OpenStep or D'OLE software. You need to remove both the keys and their values.

6 **Restart your computer.**

Installing Yellow Box for Windows

1 **Start up your computer.**

2 **If you are using Windows NT, sign on as a user that has Administrator privileges.**

Note: When you install the Yellow Box software on a Windows NT computer, you install the software for all users, not just for the user whose ID you are currently using.

3 **Insert the CD in your computer's CD-ROM drive.**

4 **Open the appropriate folder on the CD.**

- If you want to install all of the Yellow Box for Windows software, including the development tools, documentation, and sample applications, open the Dev folder.
- If you want to install just the software necessary to use Yellow Box applications, open the Deploy folder.
- If you want to install just the software necessary to use Yellow Box programs that do not have a user interface component, open the Minsys folder.

5 **Run the Setup program in the folder you opened.**

6 **Follow the onscreen instructions to install the software.**

7 **When the installation is complete, restart your computer.**

Using Yellow Box Applications

To open a Yellow Box application, you double-click its icon. Like many programs, Yellow Box applications need the services of certain system processes. The Yellow Box Installer configures your computer to start the necessary processes automatically. If you changed or removed these settings, you need to start the processes before you can use Yellow Box programs. Follow these steps:

1 **Open the Bourne Shell application.**

The Bourne Shell is installed with the Yellow Box software.

2 **Enter the following commands in the order shown.**

```
cd $NEXT_ROOT/Library/System
./machd -install
./nmserver -install
```

3 **Restart the computer.**

4 **If the Yellow Box Window Server and Pasteboard Server are not already running, use the File Manager or Explorer to locate and open them.**

These files are located in

- C:\Apple\Library\System\WindowServer.exe
- C:\Apple\Library\Frameworks\AppKit.framework\Resources\pbs.exe

5 **Open the Yellow Box application you want to use.**

Configuring Project Builder's PVCS/CVS support

If you use Intersolv's PVCS, you need to use Project Builder to load an SCM bundle before you use Project Builder's support for PVCS or CVS.

1. **Open Project Builder, then choose Preferences.**
2. **Click the Bundles pane in the Preferences window, then click Add.**
3. **In the file browser that appears, go to the $NEXT_ROOT/Developer/ProjectBuilderBundles directory.**
4. **Double-click either the PVCS or CVS bundle, as appropriate.**
5. **Quit Project Builder, then reopen it.**

Project Builder loads the selected bundle.

What you do next depends on whether you're using PVCS or CVS.

If you're using PVCS, do the following:

1. **Open the Bourne Shell program.**
2. **Enter the following command to specify the location of the PVCS program.**

```
defaults write ProjectBuilder PVCSDefaults
'{path="pvcs executable path"; userName=unknown;}'
```

Replace *pvcs executable path* with the path to your PVCS program.

3. **Enter the following command. Type "yes" at the end if you want files to be locked automatically when you start to edit them in Project Builder. Otherwise type "no."**

```
defaults write ProjectBuilder lockOnEdit yes|no
```

If you're using CVS, do the following:

1. **Open the Bourne Shell program.**
2. **Enter the following command to specify the location of the CVS program.**

```
defaults write ProjectBuilder CVSDefaults '{path="cvs
executable path"; userName=unknown;}'
```

Replace *cvs executable path* with the path to your CVS program.

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Briggs, et al.

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InfoZip

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Rhapsody Developer Release 2

Installation manual for PC-compatible computers

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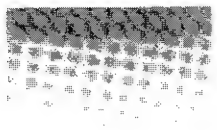

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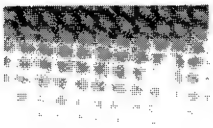


Welcome to Rhapsody

Welcome to the second developer release of Rhapsody, Apple's new operating system. This developer release provides an early look at the technologies that will give users in high-end markets a strong and flexible computing environment.

System requirements

To use this version of Rhapsody, your computer must have the following:

- 100% Pentium-compatible microprocessor
- PCI expansion bus
- hard disk drive with at least 500 MB of available space
- at least 32 MB of RAM (48 MB is recommended for development)
- supported graphics adapter (video display card)
- supported IDE or SCSI adapter
- IDE or SCSI CD-ROM drive
- one 3.5-inch floppy disk drive

Supported configurations

These hardware and features are supported by this version of Rhapsody.

	Supported	Not supported
CD-ROM drive	√	–
Monitor *single monitor only*	√	–
Ethernet TCP/IP	√	–
SCSI or IDE hard disk	√	–
Printing *PostScript™ Ethernet only*	√	–
Mouse *serial and PS/2-style*	√	–
Removable storage	√	–
Floppy disk drive	√	–
AppleTalk	–	√
Serial port	–	√
Driver Development Kit	–	√

Configuring your computer

Before you install Rhapsody, make sure your computer and other devices are correctly configured. This section has general guidelines for setting up some common equipment. For the most current information, see the documentation for your computer and equipment. For updates and late-breaking news, check the Apple Developer World Web site at the following address:
http://devworld.apple.com/

Step 1. Select and prepare your hard disk

You should install Rhapsody on your startup disk. For this version of Rhapsody, it's strongly recommended that you dedicate an entire hard disk to Rhapsody.

IMPORTANT If your computer has both a SCSI hard disk and an EIDE/ATAPI CD-ROM drive installed, you cannot run this version of Rhapsody.

IDE hard disks

To install Rhapsody on an IDE hard disk, use your computer's setup program to make sure the IDE controller and hard disk are enabled. Also, set the SCSI ID number of your CD-ROM drive to 2, 3, 4, 5, or 6 (some SCSI adapters don't work with CD-ROM drives that have SCSI ID numbers of 0 or 1).

SCSI hard disks

To install Rhapsody on a SCSI hard disk, the disk should have the lowest SCSI ID number on the SCSI chain. For example, set the disk's SCSI ID to 0 and the SCSI ID of the CD-ROM drive to 2, 3, 4, 5, or 6 (some SCSI adapters don't work with CD-ROM drives that have SCSI IDs of 0 or 1). Also, use your computer's setup program to disable IDE disks. You must do this step even if you do not have an IDE drive connected to your computer. Otherwise, the computer may not be able to use the SCSI disk as the startup disk.

> **WARNING** If your SCSI chain is not terminated, you may lose data—even if your SCSI devices seem to work correctly. Make sure the last device on your SCSI chain has a terminator. (Some devices have internal terminators.)

SCSI adapters

If your SCSI adapter has a separate floppy disk controller, you may need to disable the controller before installing Rhapsody.

Make sure your SCSI adapter is properly terminated.

Step 2. Disconnect extra floppy drives

Rhapsody works only with a single 3.5-inch floppy disk drive connected as Drive A or 0 (depending on your computer). Before installing, disconnect any other floppy disk drives, then use your computer's setup program to disable all floppy disk drives except A or 0.

Step 3. Configure other equipment

Monitor

If your computer has built-in display support and you want to use a different display adapter with Rhapsody, you may need to use your computer's setup program to disable the built-in adapter.

Serial ports

Use your computer's setup program to make sure the serial ports are configured as follows:

- Set the first serial port to IRQ 4 and port 0x3F8.
- Set the second serial port to IRQ 3 and port 0x2F8.

Mouse

If you have a serial mouse or other serial pointing device, connect it to your computer's first serial port.

Power management

To prevent the computer from going to sleep during installation, turn off any power management or energy saving features your computer may have.

Step 4. Partition your hard disk

To install Rhapsody, you need a 600 MB (minimum) hard disk or disk partition. It's recommended that you set aside an entire hard disk for Rhapsody.

If you want to install both Rhapsody and another OS on a single hard disk then you need to use a disk utility (such as fdisk) to partition the disk into at least two partitions. The Rhapsody partition must be at least 600 MB. The Rhapsody Installer reformats this partition. The other partitions are not changed.

When you partition the disk, note the number of the Rhapsody partition. You're asked to choose the correct partition during Rhapsody installation.

WARNING Do not install this version of Rhapsody on a partitioned NTFS (Windows NT) format hard disk. Doing so may result in data loss.

Step 5. Obtain device drivers

To use Rhapsody, you will need device drivers for your hard disk, CD-ROM drive, and other devices. Drivers for devices supported by this version of Rhapsody are included on the *Rhapsody Drivers* floppy disk or on the *Rhapsody for PC Compatibles* CD. Check the list of drivers in this chapter and check your hardware documentation to determine the appropriate drivers to use with your system.

If you are unable to locate compatible drivers, additional device drivers may be available at http://devworld.apple.com/

Sound drivers

Beep sound driver (drvBeepSound)
ES1x88 sound driver (drvES1x88Sound)
Microsoft Sound System–based sound driver (drvMicrosoftSound)
Sound Blaster® 8 sound driver (drvSB8Sound)
Sound Blaster 16 sound driver (drvSB16Sound)

Display drivers

ATI Rage-based display driver (drvATIRage)
Cirrus Logic GD5434-based display driver (drvCirrusLogicGD5434)
Diamond Stealth–based display driver (drvDiamondStealth)
IBM ThinkPad 760 ED display driver (drvIBMThinkPad760EDDisplay)
Matrox MGA2064W display driver (drvMatroxMGA2064W)
Number9 Imagine 128 display driver (drvNumber9Imagine128)
Number9 Imagine 128 series 2 display driver (drvNumber9Imagine128S2)
Number9 Motion 331 display driver (drvNumber9Motion331)
Number9 Motion 771 display driver (drvNumber9Motion771)
QVision display driver (drvQVision)
S3 Generic display driver (drvS3Generic)
Weitek P9000 display driver (drvWeitekP9000)
Weitek P9100 display driver (drvWeitekP9100)
VGA display driver (drvVGA)

Network drivers

DECchip21040-based network driver (drvDECchip21040)
DECchip21140-based network driver (drvDECchip21140)
DECchip21142-based network driver (drvDEC21040)
Intel EtherExpress16 network driver (drvEtherExpress)
Intel82556-based network driver (drvIntel82556)
Intel82557-based network driver (drvIntel82557)
Intel82595-based network driver (drvIntel82595)
Intel82596-based network driver (drvIntel82596)
3Com EtherLink XL (drvEtherLinkXL)
3Com EtherLink III (drvEtherLink3)
SMC 16 network driver (drvSMC16)
SMC Ultra network driver (drvSMCUltra)

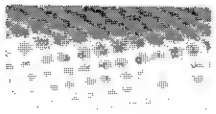
SCSI drivers

Adaptec 1542B SCSI driver (drvAdaptec1542B)
Adaptec 2940 SCSI driver (drvAdaptec2940)
Adaptec 6x60 SCSI driver (drvAdaptec6x60)
Bus Logic SCSI driver (drvBusLogic)
Bus Logic FP SCSI driver (drvBusLogicFP)
DPT SCSI driver (drvDPT2000)
Symbios Logic Sym53C8xx–based SCSI driver (drvSym53C8xx)

Other drivers

EIDE disk driver (drvEIDE)
Parallel Port driver (drvPCParallel)
Floppy disk driver (drvFloppy)
EISA Bus driver (drvEISABus)
PCI Bus driver (drvPCIBus)
PCMCIA Bus driver (drvPCMCIABus)
PCIC driver (drvIntel82365PCMCIA)
Bus Mouse driver (drvBusMouse)
PS2 Keyboard driver (drvPS2Keyboard)
PS2 Mouse driver (drvPS2Mouse)
ISA Serial Port driver (drvISASerialPort)
Serial Mouse driver (drvSerialPointingDevice)

Note: This version of Rhapsody does not support PCMCIA devices.



Installing Rhapsody

IMPORTANT Read and follow all the steps in Chapter 1 before continuing.

Step 1. Preparing to Install

1 **Insert the CD into your computer's CD-ROM drive.**

2 **Shut down your computer.**

3 **Insert the *Rhapsody Installation* floppy disk into your computer's disk drive.**

4 **Turn on your computer.**

Your computer displays a number of diagnostic messages and then starts up from the floppy disk.

After pausing a moment at the boot prompt, the computer begins loading the Rhapsody installation software from the floppy disk.

5 **When prompted, select English as the installation language.**

English is the only language available in this version.

6 **Enter 1 and press Return to confirm that you want to prepare to install Rhapsody.**

Step 2. Loading basic device drivers

When you're asked to, remove the *Rhapsody Installation* disk and insert the *Rhapsody Device Drivers* disk. This disk contains device drivers for the SCSI adapters and hard disk controllers that are compatible with this release of Rhapsody.

1 **After you insert the disk, press Return.**

The computer reads the disk and loads a few basic device drivers.

2 **Select the device driver for the SCSI adapter your CD-ROM drive is connected to.**

Refer to Chapter 1 for more information about supported device drivers. If you downloaded a driver and need to load it from another disk, you can now eject the *Rhapsody Device Drivers* disk, insert your disk, and type the number indicated on the screen for loading an alternative driver disk.

3 **Select the device driver for the SCSI adapter or hard disk controller your hard disk is connected to.**

Refer to Chapter 1 for more information about supported device drivers.

4 **Enter 1 and press Return to continue installation without loading additional drivers.**

After Rhapsody is installed, you can configure your computer for additional devices, if necessary.

Diagnostic messages appear on your screen during the installation process. Unless you encounter problems, you can ignore the diagnostic messages displayed throughout installation and startup.

Step 3. Selecting a hard disk

1 **Read the information on the screen, then enter 1 and press Return to confirm that you want to install Rhapsody.**

2 **Enter 1 and press Return to install Rhapsody on the startup disk.**

If you want select a disk other than the current startup disk, enter 2 and press Return. After the core OS is installed, you will need to make the disk you choose the startup disk before you can finish installing Rhapsody. Use your computer's setup program to specify the startup disk, or you can specify a root device at the boot prompt. (See Chapter 4 for more information about boot options.)

Step 4. Partitioning the hard disk

You can use the entire hard disk for Rhapsody, use a portion of the hard disk for Rhapsody and create a new DOS partition, or install Rhapsody on an existing partition.

WARNING All files and information on the selected disk or partition will be erased during the installation process.

- Enter 1 and press Return to use the entire disk for Rhapsody.

You can choose to set aside a portion of the disk as a DOS partition so you can install DOS or another OS later. If you do so, you're prompted to enter the size of the DOS partition you want. Then the entire hard disk is erased before the two partitions are created.

Note: You may see text on screen that refers to OpenStep partitions. These are actually Rhapsody partitions.

If you're familiar with creating DOS partitions, you can select the advanced options to run the Rhapsody version of fdisk to partition the hard disk to your specifications. When you quit fdisk, the previous menu appears, and any changes you've made are reflected in the available choices.

If you already have partitions on your hard disk, you may see additional selections in the menu. Partitions that are too small for Rhapsody installation don't appear in the list.

After you confirm your selections, the Rhapsody Installer initializes the hard disk. This process takes a few minutes.

Step 5. Installing the core OS

After the hard disk is initialized, the Rhapsody Installer copies the files for the Rhapsody core OS to the disk. This process takes several minutes.

- When prompted, remove the disk from the floppy disk drive, then press Return to restart the computer.

The boot prompt appears when you restart the computer. After a few seconds, Rhapsody will start up automatically.

Note: If you are not installing Rhapsody on the startup disk, you need to specify a root device at the boot prompt. See Chapter 4 for more information.

After a moment, the Rhapsody startup screen appears. (It is normal for this screen to be black-and-white.)

Step 6. Reinstalling additional device drivers

If you downloaded device drivers from the Apple web site and used them when installing the core OS, you need to reinstall each driver two more times: once when the computer restarts, and once again when you configure Rhapsody. Follow the onscreen instructions to reinstall the device drivers when you're asked to do so.

Step 7. Configuring Rhapsody

The Configure window lists the devices attached to the computer and their current configurations. Use Configure to specify devices and adjust their settings.

1 **Select the icon for the device you want to configure.**

The first icon lists the current Rhapsody device settings.

2 **Click Add to load a device driver for the selected device.**

After you load a driver, you may be able to adjust settings for the device. If so, additional controls appear in the Configure window.

3 **Repeat steps 1 and 2 for each device.**

4 **When you're finished, click Done, then click Save.**

You can change the settings again after you're finished installing Rhapsody. The Configure application is located in the /System/Administration folder.

Step 8. Installing the Rhapsody packages

After you configure Rhapsody, the Install Rhapsody dialog box appears. This may take several minutes. Do not restart or turn off your computer.

1 **Select all the packages you want to install.**

It's recommended that you install all the packages you may need. With this version of the Installer you cannot reinstall additional packages later.

2 **Click Install to begin the installation.**

WARNING Don't click Quit or Stop while installing Rhapsody, or you may leave your hard disk in an unusable state. If this happens, you'll need to repeat the entire installation process..

When the installation is finished, a message appears on the screen.

3 **Click Restart.**

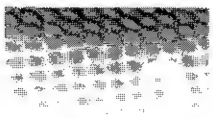
Step 9. Starting Rhapsody

When your computer restarts, wait for the boot prompt to go away (or press Return) to start Rhapsody. There may be a long delay before the Rhapsody welcome screen appears. Do not turn off or restart your computer.

- If you are not connected to a NetInfo (Rhapsody) network, enter Y to start up the computer in nonnetwork mode. You will still be able to configure the computer for TCP/IP networking.

Using the Rhapsody Setup Assistant

After the installation is complete, the Rhapsody Setup Assistant appears. Follow the onscreen instructions to configure your computer.



Getting Started With Rhapsody

Assigning passwords

Rhapsody is a multi-user operating system. Therefore, Rhapsody users must log in with a user name and password before they can access the computer. When you use the Rhapsody Setup Assistant, you specify the user name and password for one user. If you select the Automatic Login option, then you are automatically logged in using this account when you start the computer.

You can create additional Rhapsody accounts with the Network Manager application, located in the /System/Administration folder. You must know the Administrator, or "root," password to add accounts. For help, double-click NetAdmin.help, located in the /System/Administration folder.

WARNING This version of Rhapsody has not been security-qualified and is not recommended for deployment on the Internet or other public-access networks.

Using Rhapsody and another OS

If you have Rhapsody and another operating system, such as DOS or Windows, installed on the startup disk, Rhapsody installs a loader that you can use to select an operating system when you turn on your computer.

- To start Rhapsody, enter the letter indicated onscreen, or wait a few seconds and Rhapsody will start automatically.
- To start Windows or another OS stored in a DOS partition, enter d.

Finding more information about Rhapsody

- While using Rhapsody, switch to the Workspace Manager, then open the Help menu. Choose Workspace Manager Help to view information about Rhapsody.
- The NetAdmin.help file, available in the /System/Administration folder, has information about using Rhapsody networks.
- Developer documentation and sample applications are installed in the /System/Documentation/Developer folder.

Updates and news on the Internet

Updates to the documentation, additional documentation, tips, patches, and demo applications and source code are available on the Apple Developer World Web site, located at the following address: http://devworld.apple.com/

Troubleshooting

If you encounter problems when installing or using the software code-named "Rhapsody," read this chapter for solutions.

I can't set the screen resolution.

Use the Configure application (located in the /System/Administration folder) to select a display mode appropriate for your monitor and graphics adapter. If you select a mode that your hardware doesn't support, it may revert to a display mode that's not what you expected.

My monitor screen is black.

Make sure the computer hasn't gone to sleep. You should disable power management to prevent this from happening while you're installing Rhapsody.

If you have an unsupported video card in your computer, you may need to remove it or disable it, even if no monitor is attached to the card.

My computer starts up in black-and-white mode.

This is normal. Rhapsody starts up with a black-and-white display, then changes to color later in the startup process.

My mouse stopped working after I installed Rhapsody.

The Rhapsody Installer loads all the available mouse drivers to make sure you can use your mouse, but after installation is complete, you need to specify the driver for your mouse.

Restart your computer and enter `config=default` at the boot prompt to load all the available mouse drivers. After the computer starts up, use the Configure application (located in the /System/Administration folder) to set up the mouse to work with your hardware.

I used Configure, or I removed a device from my computer, and now I'm having problems with Rhapsody.

Restart the computer and enter `config=default` at the boot prompt. This will load the general set of drivers used during installation. After Rhapsody starts up, open the Configure application and adjust the settings so they are appropriate for your hardware.

I want to choose whether to start up with Windows or Rhapsody.

The Rhapsody loader allows you to start up your computer with Rhapsody or a DOS partition. For the loader to run, the Rhapsody partition must be active. Use the Terminal application to run the fdisk utility to make the Rhapsody partition active. If you have MS-DOS 5.0 or later, you can also use its version of fdisk to do this.

If the Rhapsody loader has been replaced with a DOS loader, you can restore the Rhapsody loader. To do so, log in as administrator, then enter the following in the Terminal window:

```
/usr/sbin/disk -b /dev/rsd0h
```

If you have an IDE drive, substitute *rhd0h* for *rsd0h*.

If you've uninstalled Rhapsody and want to remove the Rhapsody loader, enter the following command at the DOS prompt: `fdisk /mbr`.

I want to force an application to quit.

Switch to the File Manager, then choose Processes from the Application menu in the upper-right corner of the screen. Select the program you want to stop and click the Force Quit button.

I want to restart Rhapsody.

Switch to the Workspace Manager, then choose Logout from the File menu. Click Restart when the Login screen appears.

You can also hold down the Alt key and press the Num Lock key on the numeric keypad. Then press H to stop Rhapsody, R to restart, or C to cancel and continue working. This method should only be used as a last resort, it may result in data loss.

I can't transfer my files from Prelude to Rhapsody or OpenStep.

The Rhapsody media format, including the floppy disk format, is not compatible with the OpenStep® operating system. To transfer files from OpenStep, use the "tar" utility to archive the files. Then transfer the archive file to your Rhapsody computer using FTP. For information on using tar, open the Terminal application and enter `man tar`.

I want to view diagnostic messages during startup.

Enter `-v` at the boot prompt to start up the computer in "verbose" mode.

I want to turn off the Auto Login feature.

The Rhapsody Setup Assistant allows you to specify a user name and password to use automatically when you start the computer. In this version of Rhapsody, you can change this option by using the Setup Assistant again. You must be logged in using the Administrator account. To temporarily bypass Auto Login, hold down the mouse button when your start your computer. Then, log in as Administrator and use the Setup Assistant to turn off the Auto Login option.

I don't know what the computer's root device is.

If Rhapsody is not installed on the startup disk, you must specify a root device (the disk where startup files are stored) at the boot prompt by entering `rootdev=sd`*n*, where *n* is the Rhapsody device number of the hard disk where Rhapsody is installed.

The Rhapsody device number is dynamically assigned during startup. The correct number for your system depends on how your SCSI chain is configured.

To determine the device number assigned to your Rhapsody hard disk, follow these steps:

1 **List your external SCSI storage devices in the order of their SCSI ID numbers.**

Write down the ID numbers in ascending order, from 0 to 6. Include all disks and CD-ROM drives. Be sure to include removable media disks. Omit tape drives, scanners, or other devices that don't store files on disks.

2 **Add to the list your internal SCSI disk drives in the order of their SCSI ID numbers.**

Again, make sure the ID numbers are in ascending order and that only storage devices are included in the list.

3 **Starting at the top of the list, number the first device 0.**

Number the next device 1, the next 2, and so on.

4 **Note the number you wrote next to the hard disk where Rhapsody is installed.**

Use this number in the `rootdev` argument you enter at the boot prompt. For example, if you installed Rhapsody on the fifth device in your list, you'd enter `rootdev=sd4`.

If the Rhapsody drive has more than one partition, you must also specify a boot partition. Partitions are lettered, with the first partition *a*, the next *b*, and so on. For example, if Rhapsody is installed on the third partition of this drive, enter `rootdev=sd4c`.

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Briggs, et al.

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InfoZip

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Rhapsody Developer Release 2

Installation manual for Power Macintosh computers

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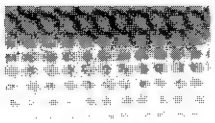

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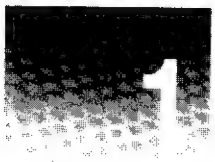


Welcome to Rhapsody

Welcome to the second developer release of Rhapsody, Apple's new operating system. This developer release provides an early look at the technologies that will give users in high-end markets a strong and flexible computing environment.

System requirements

This version of Rhapsody works with the following computers:

- Power Macintosh G3 (desktop or tower models)
- Power Macintosh 9600
- Power Macintosh 8600
- Power Macintosh 9500
- Power Macintosh 8500
- Power Macintosh 7600

Note: In this version of Rhapsody, one processor is used on multiprocessor (MP) computers.

Your computer must have

- at least 32 MB of RAM (48 MB recommended for development)
- internal video, or Apple-supplied IMS or ATI video card
- a hard disk with at least 500 MB of available space

Supported configurations

These hardware and features are supported by this version of Rhapsody.

	Supported	Not Supported
CD-ROM drive	√	–
Monitor	√	–
Ethernet TCP/IP	√	–
SCSI or IDE hard disk*	√	–
Printing *PostScript™ TCP/IP or AppleTalk*	√	–
Mouse *one and two-button*	√	–
Removable storage	√	–
Floppy disk drive	√	–
AppleTalk	√	–
Serial port	–	√
Driver Development Kit	–	√

* In this version of Rhapsody, Ultra Wide SCSI hard disks are supported but cannot be used as startup disks.

This version of Rhapsody supports the internal video of Power Macintosh G3, 8500, and 8600 models, and the IMS and ATI video cards that come with Power Macintosh 9500 and 9600 models. (Some other PCI video cards may also work, but they are not supported in this release.)

Before you begin

To install Rhapsody you need a hard disk with a minimum of 500 MB free space. To install all the software, documentation, and development tools, 1 GB of free space is recommended.

IMPORTANT You cannot install this version of Rhapsody on an Ultra Wide SCSI hard disk. You must install Rhapsody on an IDE hard disk or an external SCSI hard disk.

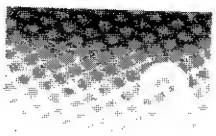
If you will be using both the Mac OS and Rhapsody on the same computer, it's recommended that you install Rhapsody on a separate, external hard disk.

If you want to install both Rhapsody and the Mac OS on a single hard disk, then you first need to use a Mac OS utility, such as Drive Setup (provided on the Rhapsody CD), to partition the disk into at least two Mac OS (HFS) partitions. The Rhapsody partition must be at least 500 MB. It will be reformatted by the Rhapsody Installer. The other partitions will not be changed.

If you have previously installed Rhapsody on your computer, you can reuse an existing Rhapsody partition. Installation will erase all the files on the partition, so make sure to back up any files you want to keep.

After you install Rhapsody, you should avoid changing the SCSI ID number of the Rhapsody hard disk. Before you install, set the disk to the ID number you want it to use. (If you change the ID number later, you'll need to use the Mac OS Multi-OS Booter application to reselect the Rhapsody boot device.)

If you have an AppleVision monitor, make sure the monitor's ADB cable is connected to the ADB port on the back of the computer. Otherwise, the monitor may not respond when you start up with Rhapsody. (See Chapter 4, "Troubleshooting," if this occurs.) Your AppleVision user's manual has information about connecting the ADB cable.



Installing Rhapsody

IMPORTANT Read and follow all the steps discussed in Chapter 1 before continuing.

Starting up from the Rhapsody CD

You must start your computer using the Rhapsody CD to install the software. The procedure depends on the software currently installed on your computer.

If your computer has both Rhapsody and the Mac OS

To install this version of Rhapsody you need to begin within the Mac OS environment. Follow these steps:

1 **Start your computer with the Mac OS.**

To start your computer with the Mac OS, follow the instructions provided with the version of Rhapsody you currently have installed. For example, if you have Rhapsody DR1 installed, restart the computer and hold down the Caps Lock key.

2 **Insert the *Rhapsody for Power Macintosh* CD in your computer's CD-ROM drive.**

3 **Restart the computer.**

4 **Hold down the C key while the computer starts up.**

Your computer starts up from the CD-ROM disc. Continue holding down the C key until you see the message "Welcome to Mac OS."

If your computer has the Mac OS only

If your computer does not currently have Rhapsody installed, follow these steps:

1. **Insert the *Rhapsody for Power Macintosh* CD in your computer's CD-ROM drive.**
2. **Restart your computer.**
3. **Hold down the C key while the computer starts up.**

   Your computer starts up from the CD-ROM disc. Continue holding down the C key until you see the message "Welcome to Mac OS."

If your computer has Rhapsody only

If your computer does not have a Mac OS hard disk or partition, follow these steps:

1. **Insert the *Rhapsody for Power Macintosh* CD in your computer's CD-ROM drive.**
2. **Shut down the computer.**
3. **Turn on the computer, then hold down the keys ⌘, Option, P, and R.**

   Hold down the keys until you hear a second startup tone. This will clear the parameter RAM (PRAM) settings and cause the computer to look for a Mac OS startup disk.

4. **Quickly release the keys, then hold down the C key.**

   This instructs the computer to start from the CD-ROM drive. Release the C key when you see the message "Welcome to Mac OS."

Selecting a destination hard disk and installing the core OS

After you've started your computer with the Rhapsody CD, follow these steps:

1 **Open the Rhapsody Install folder on the CD, then double-click the Install Rhapsody icon.**

2 **Follow the onscreen instructions to select a hard disk or partition for Rhapsody installation.**

WARNING All files and information on the selected disk or partition will be erased during the installation process.

After you select a destination hard disk, the computer restarts and begins installing the core OS. This process takes several minutes, and the progress indicator may sometimes move slowly.

When the core OS is installed, the computer restarts automatically and opens the Install Rhapsody application.

Installing the Rhapsody packages

1 **If you are not connected to a NetInfo (Rhapsody) network, enter Y to start up the computer in nonnetwork mode.**

You will still be able to configure and use TCP/IP networking.

IMPORTANT After the computer starts up, it may take a few minutes for the Install Rhapsody dialog box to appear. Do not restart or turn off your computer.

2 **Select all the packages you want to install.**

It's recommended that you install all the packages you may need. With this version of the Installer you cannot reinstall additional packages later.

3 **Click Install to continue with installation.**

WARNING Don't click Quit or Stop while installing Rhapsody, or you may leave your hard disk in an unusable state. If this happens, you'll need to start the installation from the beginning.

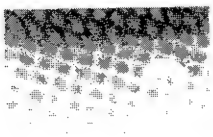
When the installation is finished, a message appears on the screen.

4 **Click Restart.**

After your computer restarts, you see a blue screen with a menu bar. There may be a long delay before the Rhapsody welcome screen appears. Do not turn off or restart your computer.

Using the Rhapsody Setup Assistant

After the installation is complete, the Rhapsody Setup Assistant appears. Follow the onscreen instructions to configure your computer.



Getting Started With Rhapsody

Assigning passwords

Rhapsody is a multi-user operating system. Therefore, Rhapsody users must log in with a user name and password before they can access the computer. When you use the Rhapsody Setup Assistant, you specify a user name and password for one user. If you select the Automatic Login option, then you are automatically logged in using this account when you start the computer.

You can create additional Rhapsody accounts with the Network Manager application, located in the /System/Administration folder. You must know the Administrator, or "root," password to add accounts. For help, double-click NetAdmin.help, located in the /System/Administration folder.

WARNING This version of Rhapsody has not been security-qualified and is not recommended for deployment on the Internet or other public-access networks.

Using Rhapsody and the Mac OS

Rhapsody includes the Mac OS application, code-named "Blue Box," which allows you to use the Mac OS and Mac OS programs within the Rhapsody environment. To use the Mac OS application, double-click the MacOS.app icon located in the /System/Applications folder.

If you want to use the Mac OS by itself (not as a Rhapsody application), you need to start up from a hard disk with the Mac OS installed on it.

Starting your computer with the Mac OS

If you're using Rhapsody and you want to start up your computer from a Mac OS disk, follow these steps:

1 **In the Workspace Manager, choose Logout from the File menu.**

2 **Click the Restart button.**

Wait until the computer restarts.

3 **Hold down the M key until you see the message "Welcome to Mac OS."**

Starting your computer with Rhapsody

If you're using the Mac OS and you want to start your computer from a Rhapsody disk, you need to install Multi-OS Booter on your Mac OS system. This allows you to select a disk or partition for your computer to obtain its startup software. Multi-OS Booter is available as an application program and as an extension. You can use either, depending on how you like to work with your computer.

Using the Multi-OS Booter application

To switch from the Mac OS to Rhapsody using the Multi-OS Booter application, follow these steps:

1. **Open the Multi-OS Booter application.**
2. **Choose the startup disk where Rhapsody is installed.**
3. **Click Save.**

   This configures your computer to use Rhapsody the next time you restart your computer.
4. **In the Finder, open the Special menu and choose Restart.**

Using the Multi-OS Booter extension

To switch from the Mac OS to Rhapsody using the Multi-OS Booter extension, follow these steps:

1. **Make sure you've installed the Multi-OS Booter extension.**

   To install the extension, drag it to your closed Mac OS System Folder, then click OK when asked to confirm that you're installing an extension.
2. **In the Finder, open the Special menu and choose Restart.**
3. **Hold down the Option key until you see the Multi-OS Booter window.**
4. **Select your Rhapsody startup disk, then click Restart.**

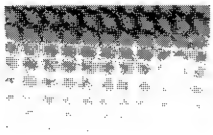
   The computer restarts and loads Rhapsody from the disk you selected.

Finding more information about Rhapsody

- The *Rhapsody for Power Macintosh Computers* CD includes documentation that you can view while using the Mac OS.
- While using Rhapsody, switch to the Workspace Manager, then open the Help menu. Choose Workspace Manager Help to view information about Rhapsody.
- The NetAdmin.help file, available in the /System/Administration folder, has information about using Rhapsody networks.
- Developer documentation and sample applications are installed in the /System/Documentation/Developer folder.

Updates and news on the Internet

Updates to the documentation, additional documentation, tips, patches, and demo applications and source code are available on the Apple Developer World Web site, located at the following address: http://devworld.apple.com/



Troubleshooting

If you encounter problems when installing or using the software code-named Rhapsody, read this chapter for solutions.

Why is my monitor screen black?

- If you have an unsupported video card in your computer, you may need to remove it, even if no monitor is attached to the card.
- If you have an AppleVision monitor, its ADB cable must be connected to the ADB port on the back of the computer. See your AppleVision user's manual.
- If you recently changed the screen resolution, you may have selected a resolution that is not supported by your monitor. Follow the instructions below to restart using the Mac OS. This will reset the screen resolution setting.
- If you changed the SCSI ID number of your Rhapsody hard disk, use the Multi-OS Booter application to identify your Rhapsody hard disk, then restart your computer. Use the following instructions to restart using the Mac OS so you can use the Multi-OS Booter program:

1 **Press Control-Power, then press the H key.**

This will halt Rhapsody. This method of stopping Rhapsody may result in data loss and should be used only as a last resort.

2 **Press ⌘-Control-Power to restart the computer.**

3 **After the startup tone, press ⌘-Option-P-R until you hear the startup tone again.**

This resets parameter RAM (PRAM) and the computer starts up with the Mac OS. Use the Monitors & Sound control panel to adjust the monitor settings. You will also need to reset your AppleTalk, time zone, startup disk, system volume, virtual memory, and disk cache settings.

Note: If you don't have a Mac OS partition or hard disk, insert a CD containing Mac OS system software and restart the computer again. Hold down the C key to start from the CD.

How do I force an application to quit?

Switch to the Workspace Manager, then choose Processes from the Application menu in the upper-right corner of the screen. Select the program you want to stop and click the Force Quit button.

How do I restart Rhapsody?

Switch to the Workspace Manager, then choose Logout from the File menu. Click Restart on the Login screen. (If you have Auto Login turned on, hold down the mouse button after you log out to force the Login screen to appear.)

How do I turn off the Auto Login feature?

The Rhapsody Setup Assistant allows you to specify a user name and password to use automatically when you start the computer. In this version of Rhapsody, you can change this option by using the Setup Assistant again. You must be logged in using the Administrator account. To temporarily bypass Auto Login, hold down the mouse button when your start your computer. Then, log in as Administrator and use the Setup Assistant to turn off the Auto Login option.

How do I transfer my files from Prelude to Rhapsody or OpenStep?

Rhapsody media formats, including floppy disk formats, cannot be transferred directly between Rhapsody and OpenStep. To transfer files from other systems, use the "tar" utility to archive the files. Then transfer the archive file to your Rhapsody computer using FTP. For information on "tar," open the Terminal application and enter `man tar`.

How do I view diagnostic messages during startup?

Hold down the V key to start up the computer in "verbose" mode.

How do I reinstall Rhapsody?

To reinstall Rhapsody, you need to restart your computer using the Rhapsody CD-ROM.

If you have a Mac OS hard drive or partition, shut down Rhapsody, then turn on your computer and hold down the M key. After the Mac OS starts up, restart you computer again and hold down the C key to start up from the Rhapsody CD.

If the Mac OS is not installed on your computer, insert the CD, then restart the computer while pressing ⌘-Option-P-R. After you hear the second start up tone, release these keys, then immediately hold down the C key to start up the computer from the Rhapsody CD-ROM disc.

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